

SEXUAL HEALTH

Unit 5

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PUBERTY

- **Puberty:** stage of growth & development when both the male & female bodies become capable of producing offspring
 - A period of great physical & emotional changes
 - Happens during adolescence

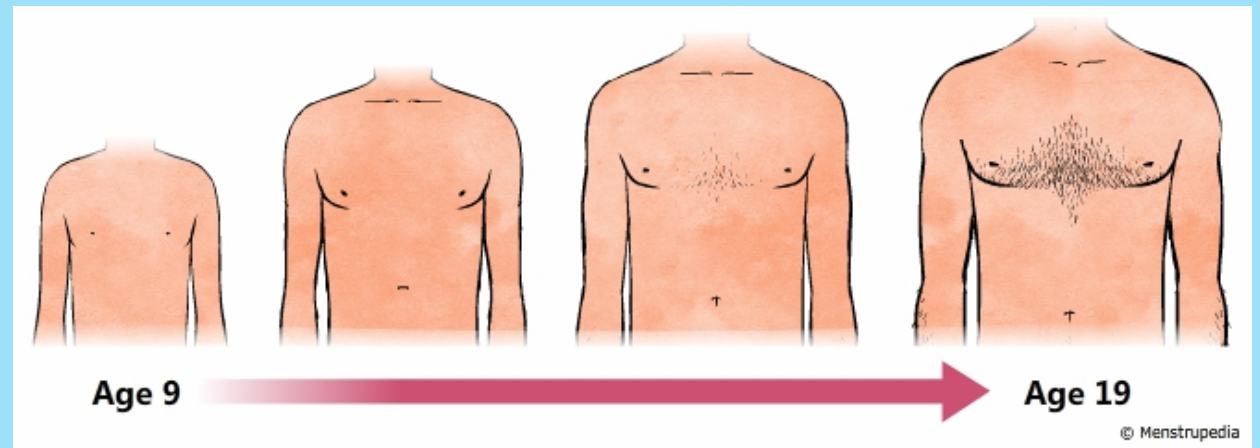
MALE REPRODUCTIVE SYSTEM

PUBERTY IN MALES

- During puberty,
 - Male's pituitary gland increases its production of a hormone called luteinizing hormone (LH)
 - **LH** travels through the bloodstream to the testes → secretes testosterone
 - **Testosterone** – hormone that produces the male secondary sex characteristics
- The maturing process is affected by:
 - Heredity
 - Diet
 - Health habits

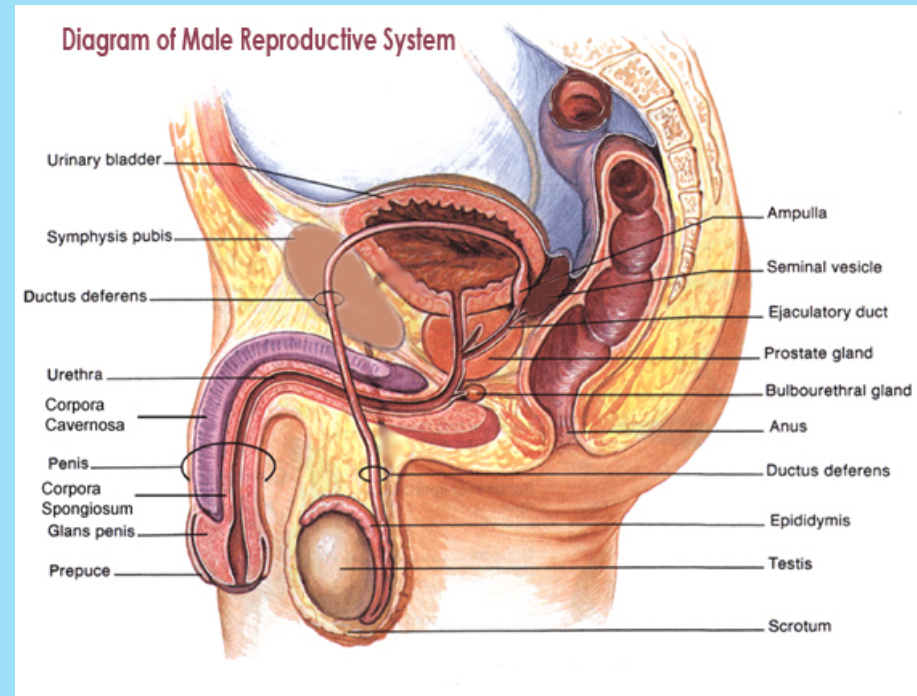
MALE SECONDARY SEX CHARACTERISTICS

- Increase in height
- Longer & heavier bones
- Broader shoulders
- Thicker & tougher skin
- Deepened voice
- Growth of facial hair, pubic hair, & body hair
- Enlargement of penis, scrotum, & testes
- Formation of sperm



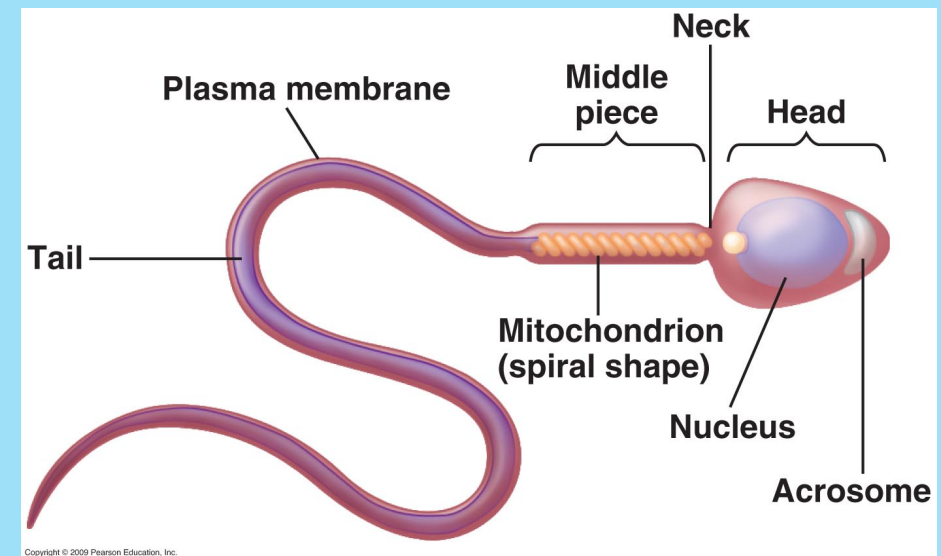
MALE REPRODUCTIVE SYSTEM

- Consists of organs in the body that help to produce offspring
- Physical changes during puberty are caused by an increase in the production of hormones
- Important external & internal structures



EXTERNAL STRUCTURES

- Penis – male sex organ used for reproduction & urination
- Scrotum – saclike pouch that hangs under the penis & holds the testes
- Testicles – male reproductive glands that produce sperm cells & testosterone
- Sperm – male reproductive cells
 - Head which contains the nucleus of the cell
 - Body & tail
 - Measures 1/6000th of an inch long
 - Makes up 2-5% of semen

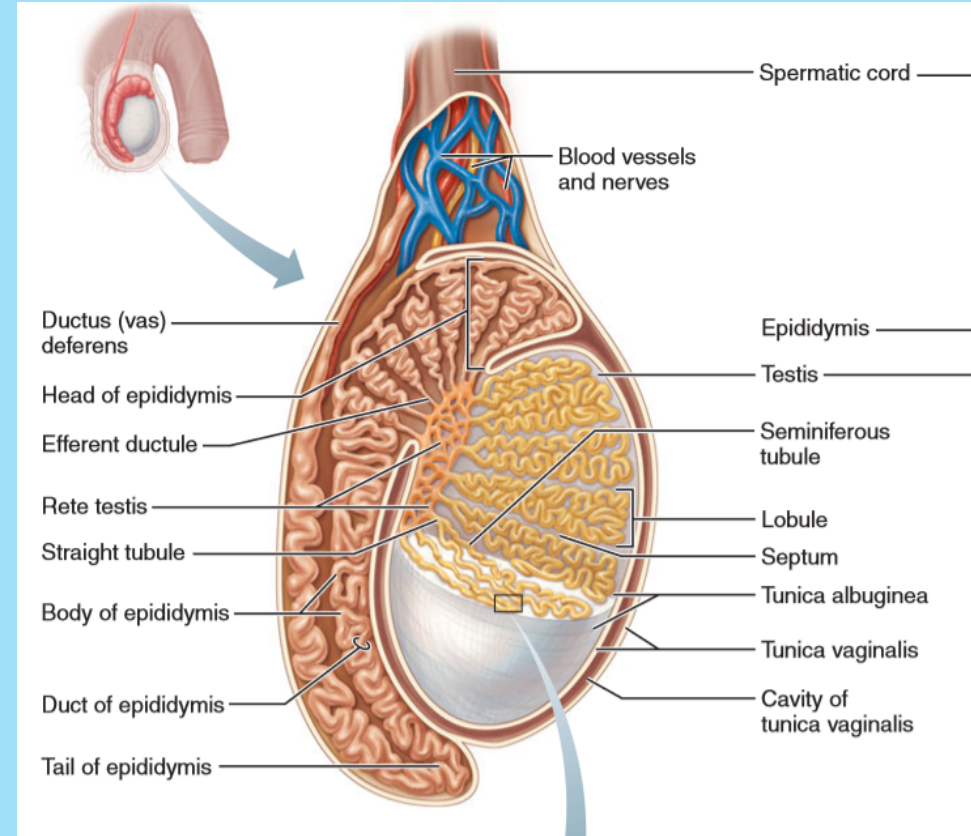


INTERNAL STRUCTURES

- Seminiferous tubules
- Spermatogenesis
- Epididymis
- Vas deferens
- Seminal vesicles
- Ejaculatory duct
- Prostate gland
- Cowper's glands
- Semen
- Erection
- Ejaculation

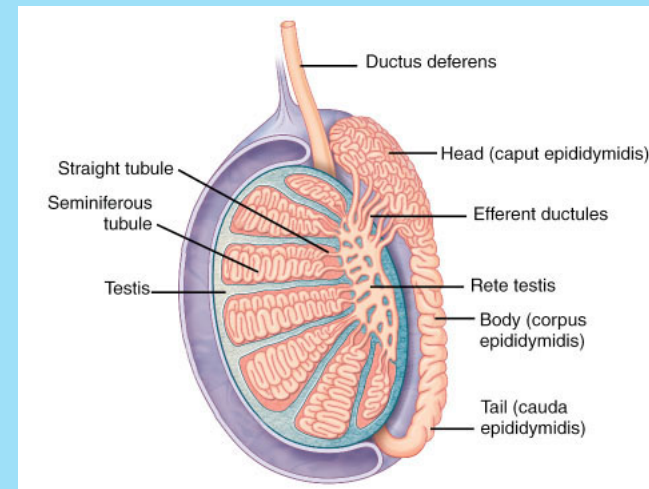
INTERNAL STRUCTURES

- The testes are divided into several sections
- Each section is filled w/ **seminiferous tubules**
 - Network of coiled tubules in which sperm are produced
 - **Spermatogenesis** – process by which sperm are produced which is
 - Stimulated by FSH which is produced in by the pituitary gland



AFTER SPERM IS PRODUCED...

- Sperm moves by contractions from the testes to the **epididymis**
 - Comma-shaped structure along the upper rear surface of the testes
 - Sperm maturation takes place here
 - Some sperm is stored here in the epididymis, but most move to the vas deferens after maturation



AFTER SPERM MATURATION...

- **Vas deferens:** two long thin tubes that act as a passageway for sperm & a place for sperm storage
 - Extend from the epididymis into the scrotum up into the abdomen
 - Walls are lined with cilia
 - The cilia & the contractions of the vas deferens help transport sperm
- In the abdomen —> vas deferens circle the bladder & connect w/ the ducts of the seminal vesicles to form the ejaculatory duct
- **Seminal vesicles:** two elongated saclike glands at the base of the bladder that secrete a fluid rich in sugar that nourishes the sperm & helps them move

MALE GLANDS

- **Prostrate gland:** gland that produces a fluid that helps keep sperm alive
 - Located beneath the bladder & surrounds the urethra
 - Without the fluid from the prostrate gland, fertilization would be almost impossible because sperm would die
- **Cowper's glands:** located beneath prostrate gland that secrete a clear, lubricating fluid into the urethra as part of the semen

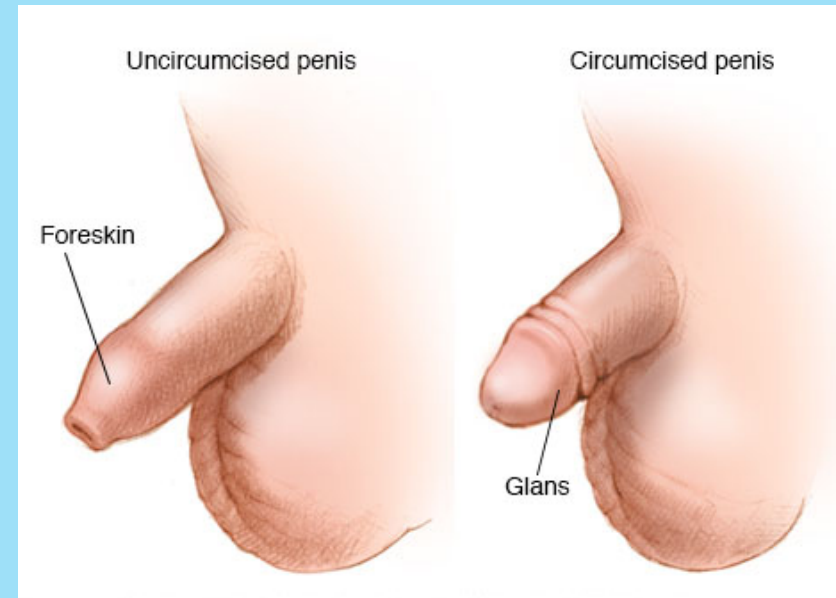
SEMEN, ERECTION, & EJACULATION

- Two small glands (about the size of peas) that secrete a clear, lubricating fluid into the urethra as part of the semen
- **Semen:** a fluid that is released by the reproductive tract
- contains sperm & other fluids from the seminal vesicles, prostate gland, & Cowper's glands
- **Erection:** process that occurs when the penis swells w/ blood & elongates
- typically followed by ejaculation (but not always the case)
- **Ejaculation:** passage of semen from the penis & is a result of a series of involuntary muscular contractions
- afterwards —> penis returns to original state

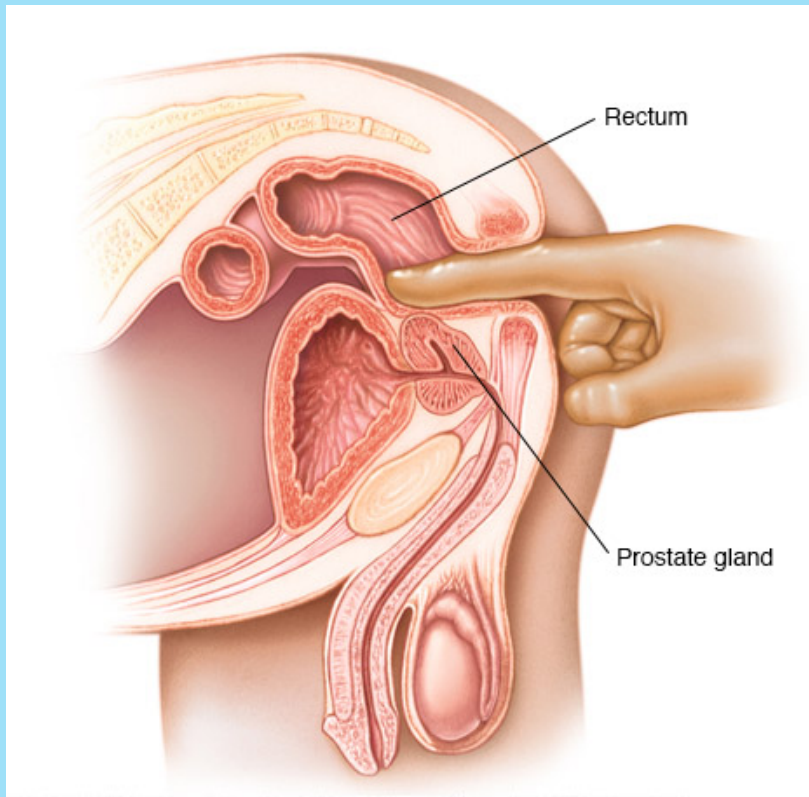
MALE REPRODUCTIVE HEALTH

WHAT IS CIRCUMCISION?

- The end of the penis is covered by a piece of skin called the foreskin
- **Circumcision:** is the surgical removal of the foreskin from the penis
 - Typically performed on the 2nd day of birth
 - Can reduce the risk of urinary infections & cancer of the penis
 - **Smegma:** substance that forms under the foreskin — dead skin & other secretions



WHY SHOULD MALES HAVE A DIGITAL RECTAL EXAM?



- Prostrate cancer
- Main symptom = enlarged prostrate
- **Digital Rectal Exam:** exam in which the physician inserts a finger into the rectum & examines the internal reproductive organs & the rectum for irregularities
- Blood test detects if protein production in the prostrate is elevated

WHAT IS TESTICULAR EXAMINATION?

- Testicular cancer is also another common cancer among males - ages 15-34
- Best method of detection — doing it yourself
- **Testicular Self-Exam:** screening procedure for testicular cancer in which a male checks his testes for lumps & tenderness
 - Early detection — high rate of cure

WHAT IS MALE INFERTILITY?

- A condition in which the ability to produce offspring is impaired
- Primary cause involves sperm
- Sperm can be affected by mumps, STDs, injuries, & hormone disorders
- Risks can be controlled
- Risks: exposure to marijuana, STDs, tobacco, intense exercise for long periods of time, excessive alcohol use

PROTECTING MALE REPRODUCTIVE HEALTH

- Protecting Male Reproductive Health
- Practice abstinence from sex
- Bend at knees & keep your back straight when lifting heavy objects
- Wear protective clothing & equipment when playing sports
- Perform testicular self-exams
- Regular medical checkups
- Seek medical attention when you show signs of infection
- Bathe/shower daily
- Maintain positive body image

FEMALE REPRODUCTIVE SYSTEM

PUBERTY IN FEMALES

- At 8 years old, pituitary gland increases its production of FSH
 - FSH causes ovaries to secrete estrogen
- **Estrogen:** hormone produced by the ovaries that stimulates the development of female secondary sex characteristics & affects the menstrual cycle



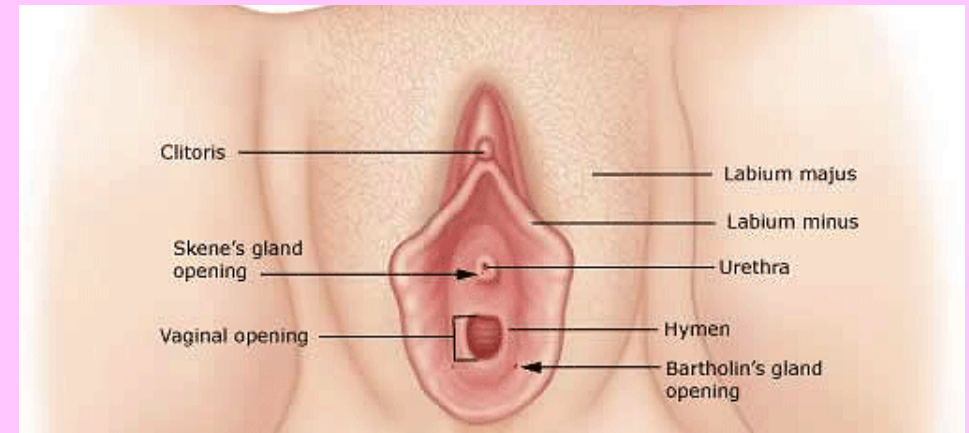
FEMALE SECONDARY SEX CHARACTERISTICS

- Increase in weight
- Widening of the hips
- Softer/smooth skin
- Growth of pubic hair & underarm hair
- Increase in breast size
- Enlargement of external genitalia
- Formation of mature ova
- Beginning of menstruation



EXTERNAL FEMALE REPRODUCTIVE SYSTEMS

- **Vulva:**
 - Mons pubis
 - Labia majora & minora
 - Clitoris
 - Vulva Vestibule, hymen
- **Mons veneris:** fatty tissue that covers the front of the pubic bone & serves as a protective cushion for the internal reproductive organs

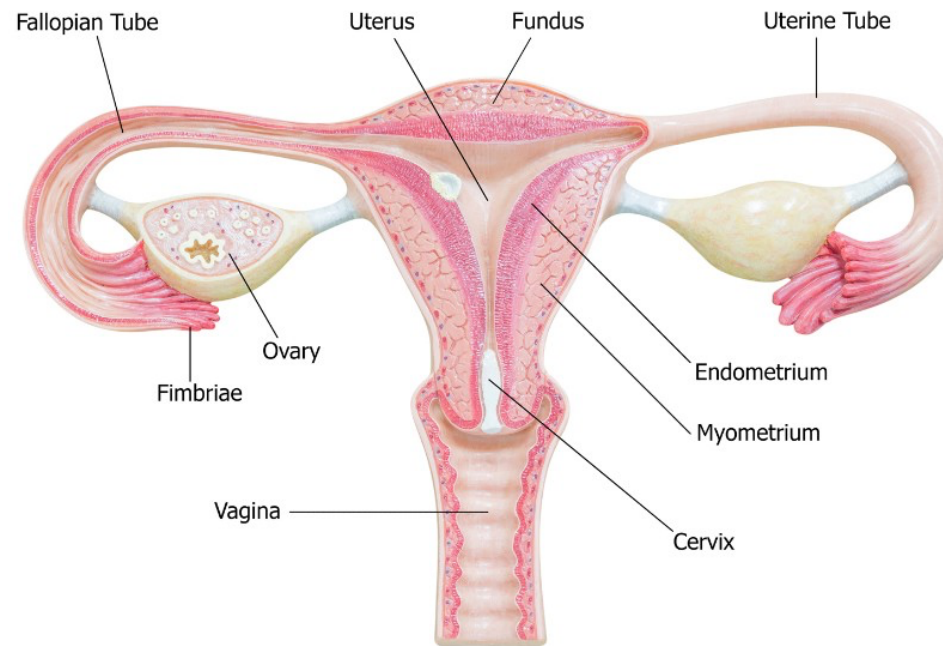


DURING PUBERTY...

- Hair begins to cover both the mons veneris & the labia majoria
 - **Labia majoria** – heavy folds of skin that surround the opening of the vagina
 - **Labia minoria** – two smaller folds of skin located within the labia majoria
 - Clitoris & the openings of the urethra, & vagina
 - **Clitoris:** small structure located above the opening of the urethra
 - **Hymen:** thin membrane that stretches across the opening of the vagina
 - Small openings in it
 - Some females do not have one
 - Some break/tear hymen when they ride a bicycle or exercise strenuously

INTERNAL FEMALE REPRODUCTIVE ORGANS

- Ovaries
- Fallopian tubes (oviducts)
- Uterus
- Vagina
- Cervix



OVARIES & OVULATION

- **Ovaries:** female reproductive glands that produce ova & estrogen
 - Located under lower abdomen
 - Born w/ 200,000 to 400,000 immature ova in the ovaries
 - about 375 ovum will mature & be released in a female's lifetime
- During puberty:
 - Ova begin to develop
 - Each developing ovum is enclosed in a small, hollow ball called a follicle
 - Each month, an ovum matures & is released from its follicle → **ovulation**
 - Release of a mature egg from one of the two ovaries

OVULATION, THE FALLOPIAN TUBES, & THE MENSTRUAL CYCLE

- When an ovum is released from an ovary, it enters the fallopian tubes
- **Fallopian tubes:** a tube through which an ovum moves from an ovary to the uterus
- During the menstrual cycle:
 - Mature ovum travels toward the uterus
 - If fertilization occurs → usually occurs in a Fallopian tube
 - If fertilization does not occur → ovum disintegrates in the uterus or leaves the body during menstruation

UTERUS, CERVIX, & VAGINA

- **Uterus:** muscular organ that receives & supports the fertilized ovum during pregnancy & contracts during childbirth to help with delivery
- **Cervix:** lowest part of the uterus that connects to the vagina
- **Vagina:** muscular tube that connects the uterus to the outside of the body
 - For sexual intercourse, the birth canal, & passageway for menstrual flow

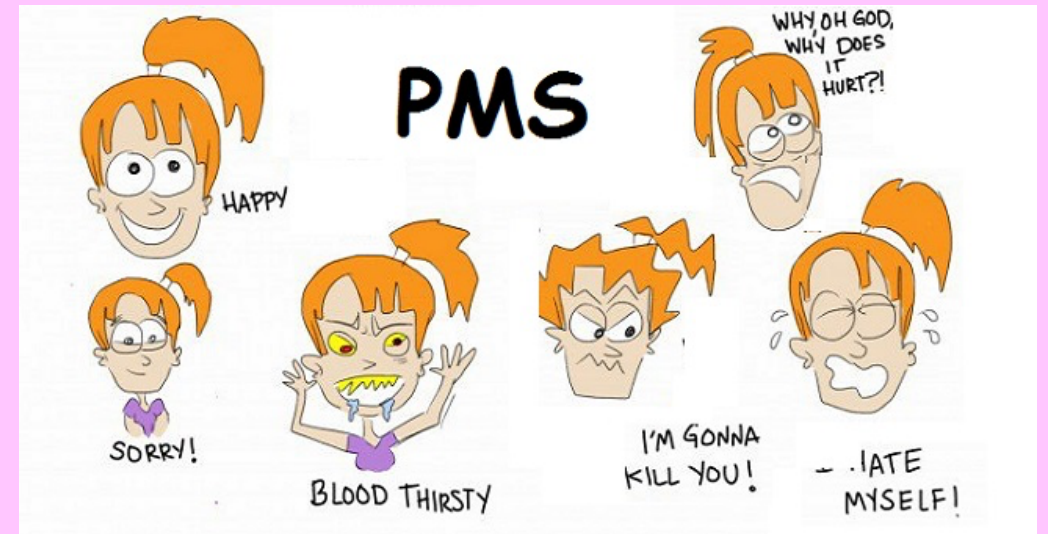
FEMALE REPRODUCTIVE HEALTH

WHAT PRODUCTS CAN BE USED TO ABSORB THE MENSTRUAL FLOW?

- Pads, tampons, panty liners
- Pads & tampons must be changed every 4-6 hours
- **Toxic Shock Syndrome (TSS):** a severe illness that results when vaginal bacteria secrete a toxin that gets into the bloodstream
 - Rare but occurs in women ages 15-44 that use tampons
 - Symptoms include: high fevers, vomiting, diarrhea, dizziness, fainting, rash
 - Other symptoms: sudden drop in BP, kidney & heart failure, difficulty breathing

WHAT IS PREMENSTRUAL SYNDROME (PMS)?

- Combination of physical & emotional symptoms that affect a female a week to 10 days prior to menstruation
- Symptoms include:
 - Weight gain, mild to severe menstrual cramps, bloating, swollen breasts, headache, backache, constipation, mood swings, cravings, anxiety, & depression
- Can avoid certain symptoms by:
 - Avoiding caffeine & salt → reduces chances to retain fluid
 - Exercise → produce beta-endorphins that improve mood & reduce anxiety & depression
 - Prescription medications

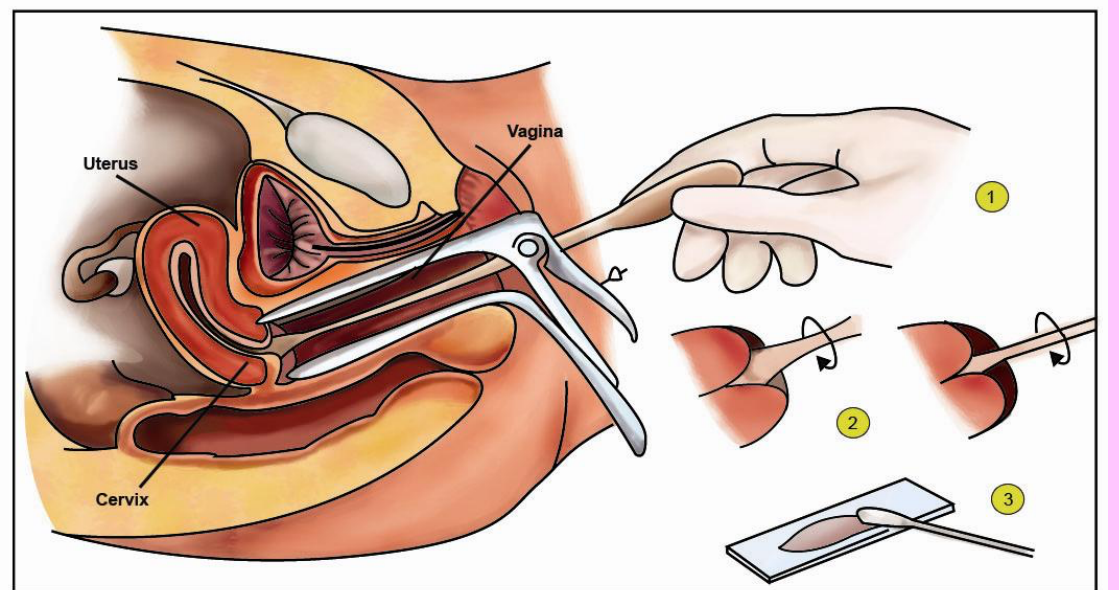


WHAT CAUSES A MISSED MENSTRUAL CYCLE?

- **Amenorrhea:** absence of menstruation
- Some females do not experience the menstrual cycle at puberty
 - Underdeveloped female reproductive organs, poor general health, &/or emotional health
 - Reduction of red blood cell levels resulting from stress, overtraining, eating disorders, drastic weight loss, or anemia

PELVIC EXAMINATIONS

- Examination of the internal female reproductive system
- **Pap smear:** screening test in which cells are scraped from the cervix & examined to detect cervical cancer



WHAT IS A YEAST INFECTION?

- A vaginal infection caused by a fungal organism
- Symptoms:
 - Thick, malodorous discharge, vaginal & labial itching, & painful urination
- Seek medical attention, OTC ointment/prescription medications

BREAST CANCER

- Most common among females
- Risk factors:
 - 50+ years old
 - Having no pregnancies or having a 1st child after 30 years old
 - Family history of breast cancer; more specifically of a mother/sister
- Treatments:
 - Lumpectomy
 - Partial mastectomy
 - Total mastectomy
 - Followed by chemotherapy or radiation
 - Early detection

WHAT IS FEMALE INFERTILITY?

- Condition of the reproductive system that impairs the ability of the female to become pregnant
- Conceptions/fertilization depends on:
 - Production of healthy ovum & healthy sperm
 - Unblocked Fallopian tubes
- Infertility does not equal sterility
- Most common female factor → ovulation
- Same risk factors as males

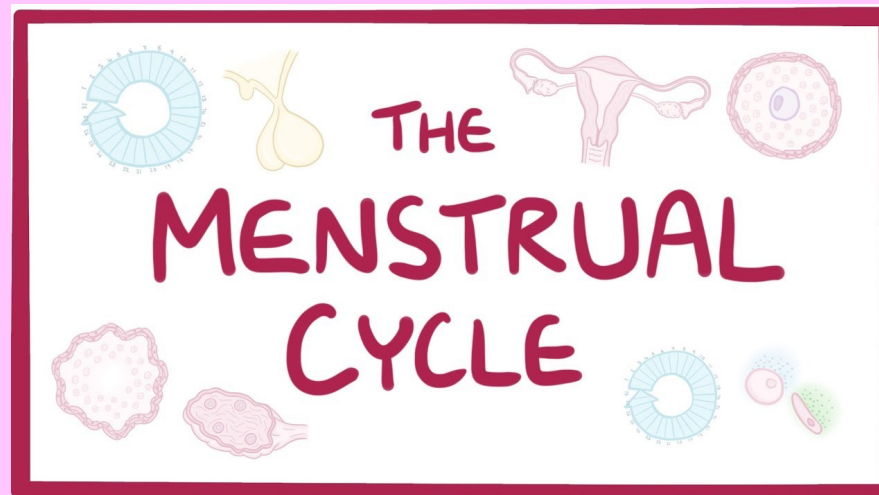
PROTECTING FEMALE REPRODUCTIVE HEALTH

- Practice abstinence from sex
- Make a note of any questions you have about cramps, mood swings, or heavy menstrual flow
- Practice good menstrual hygiene habits
- Choose habits that prevent or lessen menstrual cramps
- Keep a calendar to record information about your menstrual cycle
- Perform monthly breast self-examinations
- Have regular medical checkups
- Seek medical attention when you show signs of infection

MENSTRUAL CYCLE

BREAKDOWN OF THE MENSTRUAL CYCLE

- **Menstrual cycle:** monthly series of changes that involves ovulation, changes in the uterine lining, & menstruation
 - Usually occurs over 28 days
- **Menstruation:** period in the menstrual cycle in which the unfertilized egg & the lining of the uterus
 - Usually lasts 5 days



DAY 1-5

- Menstruation occurs
- Menstrual flow consists of about 2 oz. of blood
- Small pieces of uterine lining
- Simultaneously, a new ovum is developing in the ovary

DAY 6-12

- Uterine lining begins to thicken
- Uterus prepares for ovulation & the possibility that an ovum will be fertilized

DAY 13-14

- Ovulation occurs
- A follicle in an ovary bursts
- An ovum is released into one of the Fallopian tubes

DAY 15-20

- Corpus luteum secretes hormone to support a pregnancy
- **Corpus luteum:** temporary gland that secretes progesterone
 - Formed when the remains of the burst follicle close
 - **Progesterone** – hormone that changes the lining of the uterus
 - As the uterine lining changes → prepares to support a fertilized ovum
 - If fertilization occurs → corpus luteum continues to secrete progesterone throughout pregnancy

DAY 21-28

- Corpus luteum disintegrates if an ovum is not fertilized
- Progesterone no longer is secreted
- Cells of the lining of the uterus die without progesterone
- The unfertilized ovum disintegrates
- The menstrual cycle begins again w/ menstruation